

Table 13.--Summary of the Seasonal Kendall trend test results for selected water-quality data stored in U.S. Environmental Protection Agency Storage and Retrieval System and collected for selected previous investigations in the study area--Continued

[Only results with a probability less than 0.05 are shown. The alpha significance level was  $\leq 0.05$ . The null hypothesis tested was that there is no trend. \* indicates that trend tests were made but trends were insignificant or data were questionable; <0.001 indicates probability level less than 0.001; --, insufficient data for analysis]

Water-quality zone or location identifier (table 9)		Pamlico River water-quality zones																				Chlorophyll-a corrected for				
Probability (P)	Trend slope (Slope)	Dissolved oxygen	pH	Alkalinity	Turbidity	Total solids	Total volatile solids	Total non-volatile solids	Suspended solids	Volatile suspended solids	Non-suspended solids	Total hardness	Salinity	Disolved chloride	Total organic carbon	Total ammonia plus organic nitrogen	Total phosphorus	Total nitrite plus phosphate	Disolved phosphorus	Biochemical oxygen demand	Fecal streptococci	Fecal coliform	Fecal phaeo-pigments	Chlorophyll-a		
Number of observations (N)	Period of record (Record)																									
PR1	P	*	<.001	*	*	*	*	--	--	*	.032	--	*	*	--	*	<.001	*	<.001	*	*	--	.017	--	*	
	Slope	--	-.038	--	59	--	--	--	--	-.500	--	-.429	--	--	--	--	.022	-.005	--	--	2.5	--	--	--		
	N	1,252	1,496	99	59	51	38	38	106	70	70	21	635	75	7	932	693	87	1,051	319	135	5	175	24	928	
Record	1958-88	1958-88	1968-86	1973-88	1973-87	1973-85	1973-85	1973-85	1973-88	1973-86	1973-86	1983-88	1977-88	1976-88	1976-77	1969-88	1970-88	1973-88	1967-88	1969-74	1969-88	1969-70	1973-88	1983-88	1970-88	
PR2	P	<.001	*	*	*	*	*	*	*	*	*	--	--	.023	*	--	<.001	<.001	.006	.02	*	*	--	--	--	.020
	Slope	.070	--	--	--	--	--	--	--	--	--	--	--	-.032	--	--	-.004	.019	-.005	.002	--	--	--	--	--	.175
	N	1,358	1,073	102	46	53	49	49	74	63	63	20	1,154	87	14	877	725	114	962	127	162	5	1	8	856	
Record	1958-88	1958-88	1968-86	1973-88	1976-85	1976-85	1976-85	1976-85	1976-88	1976-86	1976-86	1983-88	1968-88	1975-88	1976-77	1969-88	1970-88	1973-88	1968-88	1969-74	1974-87	1968-70	1982	1982-88	1970-88	
PR3	P	.001	.024	--	--	--	--	--	--	--	--	--	*	--	--	<.001	<.001	--	.001	*	--	--	--	--	--	*
	Slope	.066	-.017	--	--	--	--	--	--	--	--	--	--	--	--	-.004	.025	--	.003	--	--	--	--	--	--	
	N	387	629	0	0	0	0	0	0	0	0	0	0	836	0	0	354	265	0	464	249	0	0	0	0	373
Record	1968-85	1969-86	0	0	0	0	0	0	0	0	0	0	1967-86	0	0	1969-86	1970-86	0	1967-85	1969-74	0	0	0	0	1970-86	
PR4	P	*	.003	*	<.001	--	--	--	*	*	*	--	*	<.001	*	*	<.001	*.	*	*	*	*	--	--	*	
	Slope	--	-.023	--	-1.05	--	--	--	--	--	--	--	--	--	--	-.004	.017	--	--	--	--	--	--	--	--	
	N	1,375	1,773	55	72	6	5	4	59	60	60	21	2,193	56	46	1,296	947	83	1,599	326	55	2	2	28	1,319	
Record	1958-88	1958-88	1968-87	1973-88	1982-85	1982-85	1982	1982-88	1982-88	1982-88	1983-88	1967-88	1982-88	1982-86	1969-88	1970-88	1973-88	1967-88	1969-74	1978-88	1968-78	1982	1982-88	1970-88		
PR5	P	<.001	.006	*	*	--	--	--	--	*	*	*	--	*	<.001	*	*	<.001	.001	.038	*	*	*	*	*	
	Slope	.081	-.025	--	--	--	--	--	--	-1.417	--	--	--	--	--	-.004	.015	-.005	.002	--	--	--	--	--	--	
	N	915	1,289	77	36	15	11	9	39	25	25	21	1,321	46	0	788	710	76	987	359	107	85	89	10	673	
Record	1968-88	1968-88	1968-86	1973-88	1978-82	1978-85	1978-80	1978-88	1978-86	1978-86	1983-88	1967-88	1977-88	0	1969-88	1970-88	1973-88	1967-88	1969-74	1977-88	1968-84	1977-85	1984-88	1970-88		
PR6	P	*	.008	--	--	--	--	--	--	--	--	--	*	--	--	<.001	<.001	--	.001	*	--	--	--	--	*	
	Slope	--	-.029	--	--	--	--	--	--	--	--	--	--	--	--	-.004	.026	--	.006	--	--	--	--	--	--	
	N	593	565	22	4	0	0	0	0	0	0	0	0	602	0	0	344	246	0	435	165	0	8	0	0	365
Record	1958-86	1958-86	1968-73	1973	0	0	0	0	0	0	0	0	1967-86	0	0	1969-86	1970-86	0	1967-85	1969-74	0	1968-70	0	0	1970-86	
PR7	P	<.001	.005	--	*	*	--	--	--	*	*	*	--	*	*	*	<.001	<.001	*	*	*	*	*	--	*	
	Slope	.044	-.025	--	--	--	--	--	--	--	--	--	--	--	--	-.003	.019	--	--	--	--	--	--	--	--	
	N	1,230	1,578	15	109	54	15	15	103	73	73	47	1,983	98	81	1,107	754	103	1,513	322	72	1	0	48	354	
Record	1957-88	1957-88	1968-84	1973-88	1982-88	1982-85	1982-85	1982-88	1982-86	1982-86	1983-88	1967-88	1982-88	1982-88	1969-88	1970-88	1973-88	1967-88	1969-74	1982-88	1982	0	1982-88	1970-88		
PR8	P	*	<.001	--	--	--	--	--	--	--	--	--	*	--	--	<.001	*	--	<.001	*	--	--	--	--	*	
	Slope	--	-.043	--	--	--	--	--	--	--	--	--	--	--	--	-.003	-.004	--	-.004	--	--	--	--	--	--	
	N	75	1,078	0	0	0	0	0	0	0	0	0	1,191	0	1	530	198	1	763	443	0	0	0	0	789	
Record	1958-76	1958-86	0	0	0	0	0	0	0	0	0	0	1967-86	0	0	1976	1969-86	1970-77	1976	1967-85	1969-74	0	0	0	0	1970-86
PR9	P	--	<.001	--	--	--	--	--	--	--	--	--	*	--	--	<.001	.008	--	<.001	*	--	--	--	--	*	
	Slope	--	<.034	--	--	--	--	--	--	--	--	--	--	--	--	-.003	.015	--	.005	--	--	--	--	--	--	
	N	12	706	0	0	0	0	0	0	0	0	0	0	684	0	0	425	273	0	483	245	0	0	0	0	435
Record	1958-77	1958-86	0	0	0	0	0	0	0	0	0	0	1969-86	0	0	1969-86	1970-86	0	1968-85	1969-74	0	0	0	0	1970-86	
PR10	P	<.001	<.001	--	--	--	--	--	--	--	--	--	-.004	--	--	<.001	<.001	--	<.001	*	--	--	--	--	*	
	Slope	.110	-.053	--	--	--	--	--	--	--	--	--	-.157	--	--	-.003	.015	--	.003	--	--	--	--	--	--	
	N	455	822	0	0	0	0	0	0	0	0	0	997	0	0	488	235	0	563	319	0	0	0	0	457	
Record	1968-86	1969-86	0	0	0	0	0	0	0	0	0	0	1967-86	0	0	1969-86	1970-86	0	1967-85	1969-74	0	0	0	0	1970-86	